

NASA TECH BRIEF

Marshall Space Flight Center



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Compensator Design for Low-Sensitivity Linear Time-Invariant Systems (COMPDES)

The problem:

A method was needed to reduce the trial and error procedures now employed in the design of low order compensators that stabilize a given dynamical system in the presence of parameter variations.

The solution:

A digital computer program has been written in FORTRAN IV that has the capability of synthesizing low order compensators to stabilize these systems.

How it's done:

The scheme for the design of the compensators is accomplished by means of a sensitivity function which is minimized with respect to the eigenvalues. A compensator is considered acceptable if a stability criteria test is satisfied.

In the present form, the program is dimensioned for a maximum of sixth order. Machine memory capacity will be a limiting factor as to whether or not the program can be redimensioned to accommodate larger order systems.

Notes:

1. This program is written in FORTRAN IV for an IBM-360 computer.
2. Inquiries concerning this program should be submitted to:

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Source: Lutz Willner of
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